

SUMMARY

The Spent Nuclear Fuel (SNF) mission consists of the Spent Nuclear Fuel Project WBS 1.3.1.1 (Project Baseline Summary [PBS] WM01) and the subsequent Canister Storage Building (CSB) Operations Project WBS 1.3.2.1 (PBS WM02), which doesn't start until FY 2004.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, and Cost/Schedule data contained herein is as of February 29, 2000. All other information is as of March 27, 2000.

The Canister Storage Building (CSB) is 95 percent complete, compared to 95 percent planned. The Cold Vacuum Drying (CVD) Facility is 89 percent complete compared to 91 percent planned.

Fabrication of production Multi-Canister Overpacks (MCOs) and MCO baskets continued at Joseph Oat, Inc. and the Hanford Site respectively.

Pre-operational Acceptance Testing of systems within Bays 4 and 5 of the Cold Vacuum Drying (CVD) Facility continued. Fabrication of equipment for installation in Bay 3 also continued. The integrated MCO/Process Pre-operational Acceptance Test was initiated.

Welding of all 220 Canister Storage Building (CSB) standard storage tubes necessary for fuel removal from K Basins was completed.

Fiscal year-to-date milestone performance (EA, DOE-HQ, and RL) shows that two out of two milestones (100%) were completed on or ahead of schedule. The Milestone Achievement details, found following cost and schedule variance analysis, provide further information on all milestone types.

ACCOMPLISHMENTS

- CSB project is 95 percent complete vs. 95 percent planned.
- CVD Facility is 89 percent complete vs. 91 percent planned.
- Completed review of the Canister Storage Building Final Safety Analysis Report (FSAR) with the RL Review Team. Concurrent review provided a shortened review process by approximately 4 weeks. All Spent Nuclear Fuel Project FSARs have been submitted to RL.
- Phase Startup Initiative (PSI) Phase 1 and II testing activities continued. Component tests of the Integrated Water Treatment System (IWTS) were completed successfully. Mechanical barriers in place separating above-water components of IWTS from the underwater components were removed and Basin water was introduced to IWTS. Pre-operational testing of all FRS subsystems is also proceeding. Received RL approval on the Plan of Action for PSI Phase III Readiness Assessment.

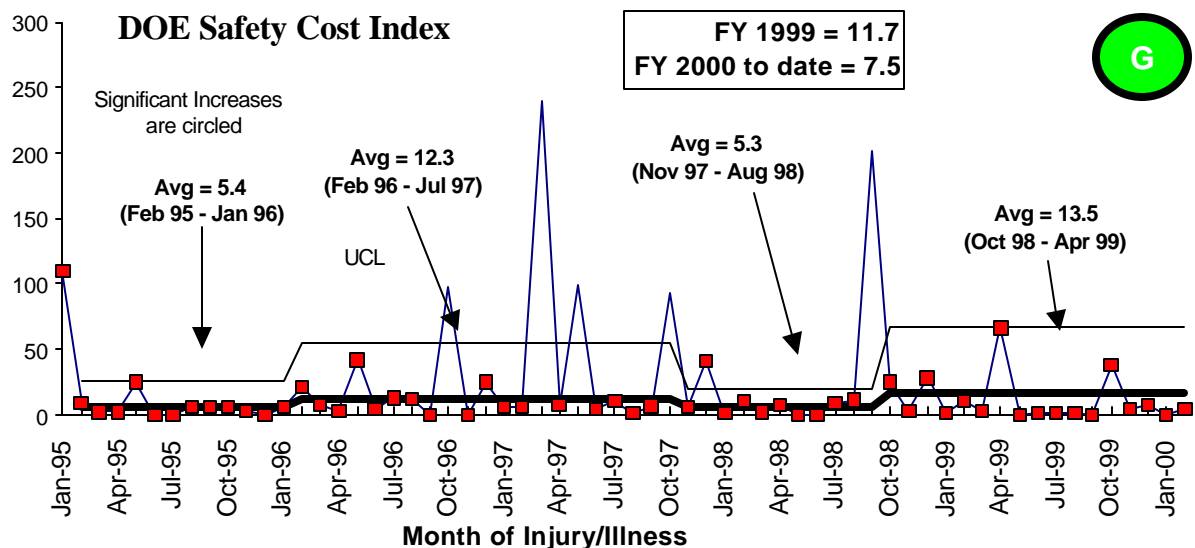
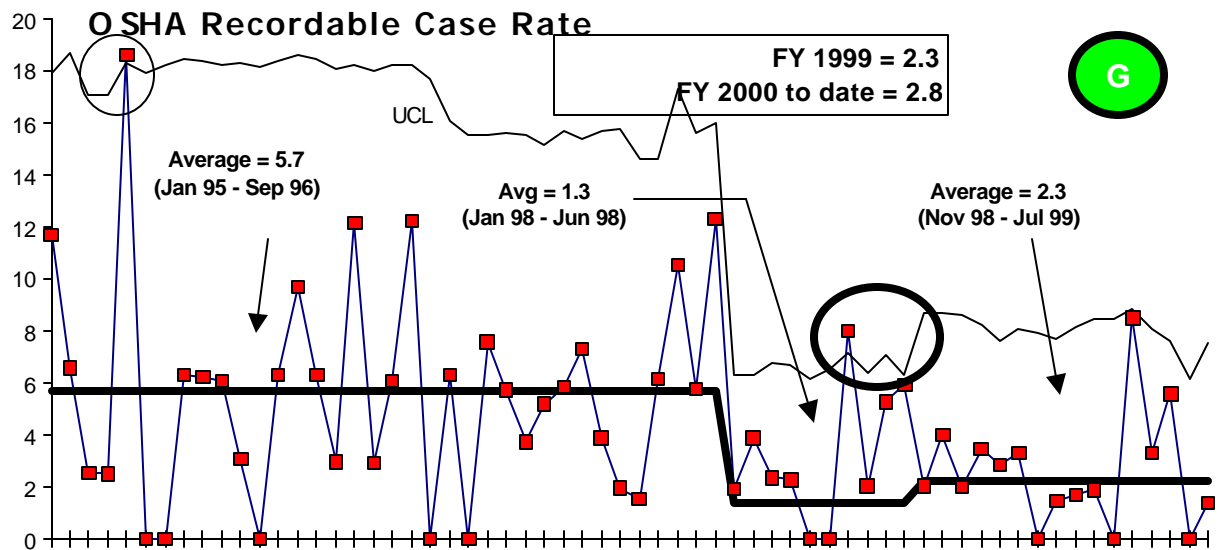
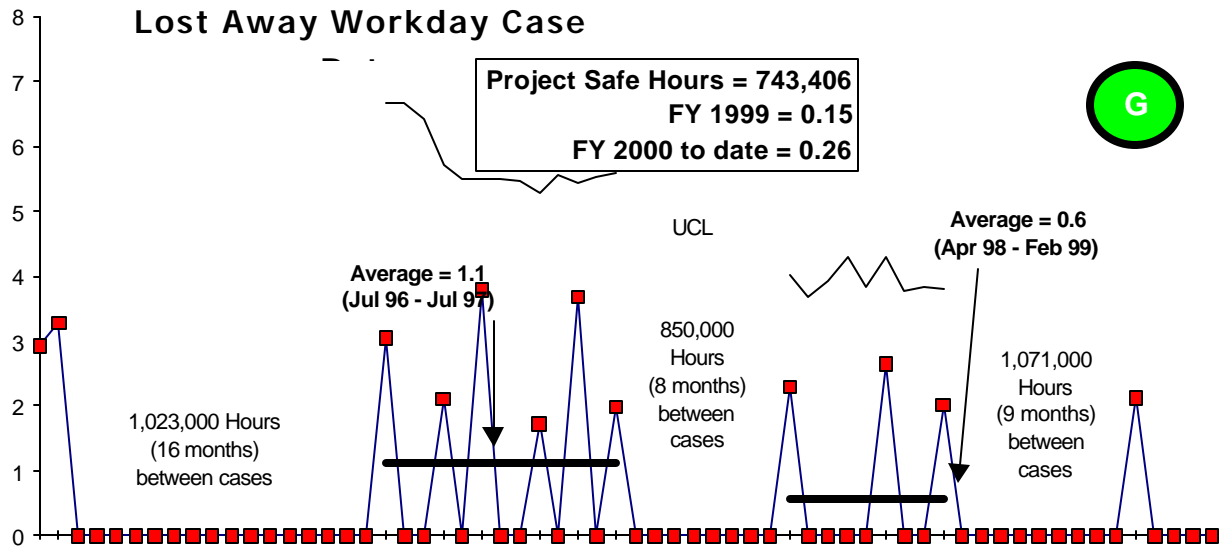
- Startup testing of the Cask Loading System (CLS) components has been initiated. A design/fabrication contract was awarded for the K East Basin IWTS. This award now allows for immediate initiation of design development for the more robust water treatment system required for K East.
- Initiated the integrated Multi-Canister Overpack (MCO)/Process Pre-operational Acceptance Test (PAT). This integrated test is being conducted after all subsystems' tests have been successfully performed, and when completed, it will demonstrate that the installed process equipment meets its performance criteria for safely drying fuel.
- The Baseline Change Request (BCR) for the sludge acceleration strategy was submitted to RL for review and approval. This strategy will accelerate completion of sludge removal from the K Basins by one year, while reducing the SNF Project total project cost by approximately \$16 million.

SAFETY

Although the SNF Project experienced some safety performance degradations with the start of FY 2000, performance appears to be recovering. October 1999 had 2 Restricted Workday Cases, and 1 Lost Away Workday Case. This was a nearly significant increase (close to but not above the UCL) on the OSHA Recordable Case Rate, and a significant increase (above the UCL) on the Lost / Restricted Workday Case Rate (which is a supplemental graph). The project has achieved almost 750,000 hours safe work hours. The past 9 of 10 months for the DOE Cost Index and Severity Rate have been below average.

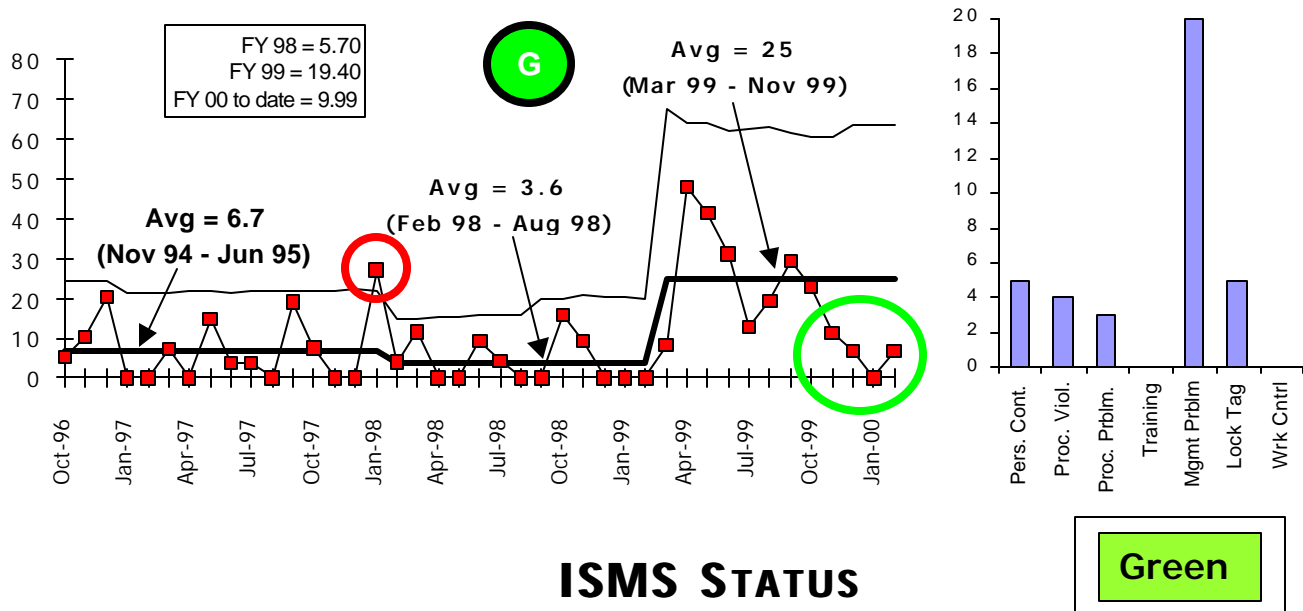
The project's safety record is improving in both OSHA recordables and DOE Cost Index. Lost away overall has had only one case in the past year.

PHMC Environmental Management Performance Report – April 2000
Section C – Spent Nuclear Fuel



CONDUCT OF OPERATIONS / ISMS STATUS

CONDUCT OF OPERATIONS Events per 200,000 hours



- The ISMS Phase I/II verification for the SNF Project was completed on November 19, 1999
- The Corrective Action Plans for the “Opportunities for Improvement” have been developed and transmitted to RL on January 10, 2000
 - The actions required to enable ISMS implementation to be declared March 31, 2000 are now complete. Documentation packages are being prepared for transmittal to the Environmental, Safety & Health organization.

BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

Breakthroughs

Green

- SNF Project has submitted a Baseline Change Request which implements a strategy to accelerate the completion of sludge removal by one year from August 2005 to August 2004 and reduce total project cost by \$16 million.

Opportunities for Improvement

Phased Startup Initiative (PSI) -- Results from the PSI are expected to improve the fuel production rates by approximately one month in FY 2001.

UPCOMING ACTIVITIES

CVD Facility Testing — Testing at the CVD Facility continues to remain on critical path. Completion of testing is scheduled for the end of May 2000.

Cask Loadout System (CLS) Testing — Complete startup testing by mid-June 2000.

Phased Startup Initiative — Complete PSI Phases 1 & 2 by mid-April 2000. Complete Phases 3 & 4 by mid-August 2000.

Storage Projects — Deliver first shipment of Multi-Canister Overpacks (MCOs) and baskets by June 1, 2000.

Fuel Removal Activities — Begin DOE Operations Readiness Review by mid-September 2000. Begin K West Basin fuel removal, drying & storage operations by November 30, 2000.

Sludge Removal Activities — Baseline Change Request submitted to affect a one-year acceleration of the completion of K Basin sludge removal by February 2001.

COST PERFORMANCE (\$M):

	BCWP	ACWP	VARIANCE
Spent Nuclear Fuel	\$70.9	\$82.3	- \$11.4

The unfavorable cost variance of \$11.4 million (16 percent) is primarily due to engineering, testing, transition and administrative support underestimated for FY 2000; KW punchlist items not in baseline; and Hanford Site assessments higher than baseline.

SCHEDULE PERFORMANCE (\$M):

	BCWP	BCWS	VARIANCE
Spent Nuclear Fuel	\$70.9	\$71.3	- \$0.4

The unfavorable schedule variance of \$0.4 million (1 percent) is within the threshold.

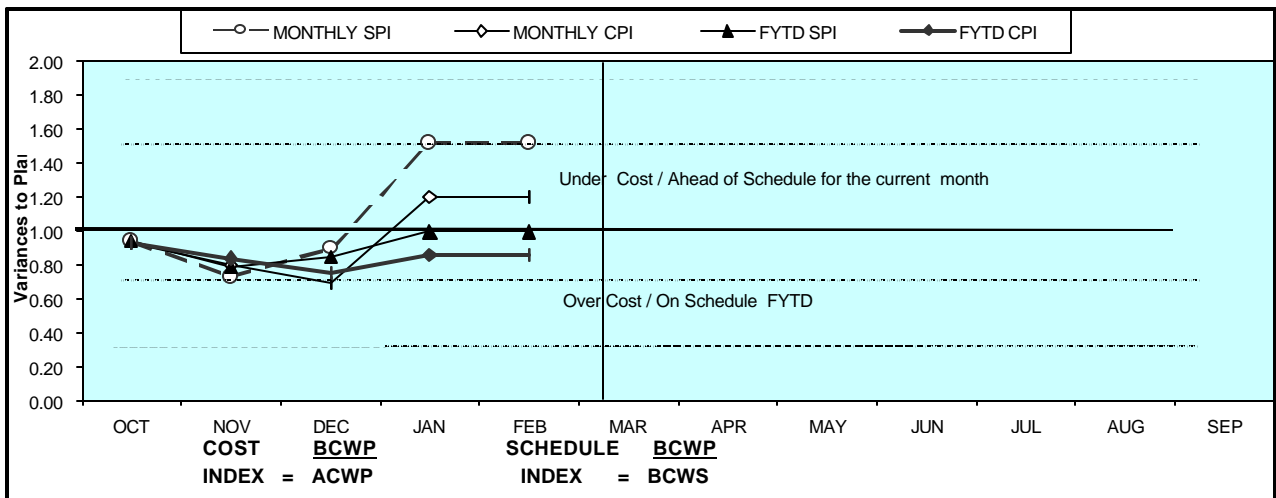
FY 2000 COST/SCHEDULE PERFORMANCE – ALL FUND TYPES

CUMULATIVE TO DATE STATUS – (\$000)

Yellow

		FYTD							
	Bv PBS	BCWS	BCWP	ACWP	SV	%	CV	%	PEM
	Spent Nuclear								
WM01	Fuel Project	\$ 71,297	\$ 70,917	\$ 82,314	\$ (380)	-1%	\$ (11,397)	-16%	\$ 195,067
	Total	\$ 71,297	\$ 70,917	\$ 82,314	\$ (380)	-1%	\$ (11,397)	-16%	\$ 195,067

COST/SCHEDULE PERFORMANCE INDICES (FEBRUARY 2000 AND FYTD)



FY 2000	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY SPI	0.94	0.73	0.90	1.52	1.52							
MONTHLY CPI	0.93	0.79	0.69	1.20	1.20							
FYTD SPI	0.94	0.79	0.85	0.99	0.99							
FYTD CPI	0.93	0.84	0.75	0.86	0.86							
MONTHLY BCWS	\$8,574	\$19,209	\$27,762	\$15,752	\$15,752							
MONTHLY BCWP	\$8,049	\$13,968	\$24,990	\$23,910	\$23,910							
MONTHLY ACWP	\$8,626	\$17,581	\$36,201	\$19,906	\$19,906							
FYTD BCWS	\$8,574	\$27,783	\$43,464	\$55,545	\$71,297							
FYTD BCWP	\$8,049	\$22,017	\$33,786	\$47,007	\$70,917							
FYTD ACWP	\$8,626	\$26,207	\$44,568	\$62,408	\$82,314							

COST VARIANCE ANALYSIS: (- \$11.4)

WBS/PBS

1.3.1/WM01

Title

Spent Nuclear Fuel Project

Description/Cause: The unfavorable cost variance of \$11.4M (16.1 percent) is due to engineering, testing, transition and administrative support underestimated for FY 2000 (64%); KW punchlist items not in baseline (14%); and Hanford Site assessments higher than baseline (10%).

Impact: These overruns were anticipated changes foreseen during the contingency analysis and will be allocated through change control. Additional unanticipated cost impacts, i.e., rate increases, Corrective Action Management, Hanford Security, fee allocation are likely to have an adverse impact unless outside funding sources are made available. In addition, Change Requests (CRs) have been developed and reviewed and are on hold pending source availability for KW punchlist items, engineering, testing and administrative support.

Corrective Action: Pursue other Hanford funding to cover site issues and prioritize SNF work within available SNF budget.

SCHEDULE VARIANCE ANALYSIS: (- \$0.4)

WBS/PBS

Title

1.3.1/ WM01

Spent Nuclear Fuel Project

Description /Cause: The unfavorable schedule variance of \$0.4M (0.5 percent) is within the threshold.

Impact: None.

Corrective Action: None.

ISSUES

There are no technical, DOE, Regulator or external issues identified at this time.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS (\$000)

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY00 COST IMPACT \$000	SCH	TECH	DATE TO FDH CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
SNF-2000-008	11/29/99	Change Path Forward for K-Basin Sludge from Interim Storage in TWRS Double-Shell Tanks to T Plant		Y	Y	1/5/00	1/5/00	2/17/00	Received RL CO signature, 2/17/2000.
SNF-2000-009	1/31/00	Sludge Acceleration Strategy		Y	Y	2/24/00	2/25/00		Transmitted to RL 2/28/00.
SNF-2000-010	1/31/00	SNF Project FY2000 MYWP Revised Rate Impacts		N	N				In preparation.
SNF-2000-012	2/16/00	Site Wide SNF Reschedule Due to Hanford Site Priorities	<\$1,300>	Y	N				In preparation.
SNF-2000-013	3/6/00	Delayed Scope for TGA Sample Disposal		Y	Y				In preparation.
SNF-2000-014	3/20/00	FY2000 Budget Authority Increase	\$1,300	N	N				In preparation.
ADVANCE WORK AUTHORIZATIONS									
None									

SPENT NUCLEAR FUELS – WBS 1.3 MILESTONE ACHIEVEMENT

M ILESTONE TYPE	FISCAL YEAR-TO-DATE				REMAINING SCHEDULED			TOTAL FY 2000
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	1	1	0	0	0	0	0	2
DOE-HQ	0	0	0	0	0	0	0	0
RL	0	0	0	0	0	4	0	4
Total Project	1	1	0	0	0	4	0	6

Green

Status as of 3/27/2000

Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
M-34-14A (S06-97-009)	"Complete K West Basin Cask Facility Modules"	due 2/29/00 — Completed on schedule
M-34-04 (S01-99-124),	"Submit Remedial Design Report/Remedial Action Work Plan for the K Basins"	due 3/31/00 - Completed over 1 month early (2/10/00).
M-34-15B-T01	"Complete remaining bay(s) of the Cold Vacuum Drying Facility construction and installation"	due 6/30/00 – Proposed BCR SNF-2000-009 will delete this milestone.
M-34-13B-T01	"Complete construction and installation of K East Basin Spent Nuclear Fuel Retrieval System"	due 11/30/00 - Proposed BCR SNF-2000-009 will defer this milestone to 3/31/02.
M-34-16 (S00-01-900)	"Initiate removal of K West Basin Spent Nuclear Fuel"	due 11/30/00 - On schedule.
M-34-06-T01	"Initiate K West Basin Spent Nuclear Fuel Canister Cleaning Operations"	due 12/31/00 - On schedule.

DNFSB Commitments

	Nothing to report	

MILESTONE EXCEPTION REPORT

<u>Number/WBS</u>	<u>Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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OVERDUE – 0

FORECAST LATE – 0

PERFORMANCE OBJECTIVES

Readiness for Fuel Movement (RC-1-1.a-I) ¾ Contractor completion of construction and operational testing, Management Self-Assessment, and Independent ORR by 9/14/00 to begin moving fuel by 11/30/00. Start of fuel movement is currently on track for 11/30/00.

Green

Phased Startup Initiative (PSI) (RC-1-1.a-II) ¾ Complete PSI Phases 1 & 2 by April 15, 2000. This includes successful Cold Testing of IWTS & FRS. This activity is behind schedule.

Yellow

K East Fuel Retrieval System (RC-1-1.b) ¾ Complete facility modification necessary to allow FRS installation by September 30, 2000, as defined in the MYWP. Baseline Change Request in process to remove this activity with implementation of new strategy.

Red

Accelerate Fuel Movement (RC-1SS-1) ¾ Accelerate start of fuel movement by two months. Assumes no problems during first fuel movement and no ORR or MSA discrepancies.

Yellow

Phased Startup Initiative (PSI) (RC-1SS-2) ¾ Complete Phases 3 & 4 by August 15, 2000. This includes completion of FRS/IWTS system testing using SNF (real fuel) and completion of CCD2. This activity is on schedule.

Green

KEY INTEGRATION ACTIVITIES

- Spent nuclear fuel (SNF) final disposition interface activities, including OCRWM QA Program implementation, ongoing with National SNF Program.
- K Basins sludge removal and Shipping port (PA) Pressurized Water Reactor Core 2 SNF removal implementation activities ongoing with Waste Management; Baseline Change Requests are in preparation by the SNF Project and Waste Management to support integrated activity for accelerated sludge removal strategy. Funding authorized for initial T-Plant readiness activities.
- 324 Building (B Cell) SNF removal acceptance criteria and conceptual design reviews ongoing with River Corridor Project.
- Neutron Radiography Facility, Training, Research and Isotope Production, General Atomics (TRIGA), and FFTF SNF relocation planning ongoing with FFTF Project.
- Input provided to BHI on recovery actions required if SNF is discovered during upcoming reactor basins deactivation.
- Completed assessment and draft documentation for the Canister Storage Building's readiness to support the receipt of Immobilized High Level Waste (IHLW) from ORP. This is in direct support of DOE's Readiness to Proceed determination of the Hanford Vitrification Plan.